The University of Queensland (UQ) contributes positively to society by engaging in the creation, preservation, transfer and application of knowledge. UQ helps shape the future by bringing together and developing leaders in their fields to inspire the next generation and to advance ideas that benefit the world. UQ strives for the personal and professional success of its students, staff and alumni. For more than a century, we have educated and worked with outstanding people to deliver knowledge leadership for a better world.

UQ ranks in the world’s top universities, as measured by several key independent ranking, including the Performance Ranking of Scientific Papers for World Universities (43), the US News Best Global Universities Rankings (52), QS World University Rankings (47), Academic Ranking of World Universities (55), and the Times Higher Education World University Rankings (60). UQ again topped the nation in the prestigious Nature Index and our Life Sciences subject field ranking in the Academic Ranking of World Universities was the highest in Australia at 20.

UQ has an outstanding reputation for the quality of its teachers, its educational programs and employment outcomes for its students. Our students remain at the heart of what we do. The UQ experience – the UQ Advantage – is distinguished by a research enriched curriculum, international collaborations, industry engagement and opportunities that nurture and develop future leaders. UQ has a strong focus on teaching excellence, winning more national teaching excellence awards than any other in the country and attracting the majority of Queensland’s highest academic achievers, as well as top interstate and overseas students.

UQ is one of Australia’s Group of Eight, a charter member of edX and a founding member of Universitas 21, an international consortium of leading research-intensive universities.

Our 50,000-plus strong student community includes more than 13,000 postgraduate scholars and more than 12,000 international students from 144 countries, adding to its proud 240,000-plus alumni. The University has about 7,000 academic and professional staff and a $1.8 billion annual operating budget. Its major campuses are at St Lucia, Gatton and Herston, in addition to teaching and research sites around Queensland and Brisbane city. The University has six Faculties and four University-level Institutes. The Institutes, funded by government and industry grants, philanthropy and commercialisation activities, have built scale and focus in research areas in neuroscience, biomolecular and biomedical sciences,
sustainable minerals, bioengineering and nanotechnology, as well as social science research.

UQ has an outstanding track-record in commercialisation of our innovation with major technologies employed across the globe and integral to gross product sales of $11billion+ (see http://uniqest.com.au/our-track-record).

UQ has a rapidly growing record of attracting philanthropic support for its activities and this will be a strategic focus going forward.

Organisational Environment

With an excellent reputation for quality graduate training and research performance, the School of Mechanical and Mining Engineering delivers a comprehensive range of programs in aerospace, materials, mechanical, mechatronic and mining engineering.

Boasting strong student enrolments in professionally accredited programs, combined with world-class researchers and facilities, we are focused on strengthening our position in the engineering community. We will develop global solutions to contemporary issues and mentor the leaders of tomorrow by attracting the brightest minds and fostering a truly innovative and collaborative work environment.

The School recognises and values equity and diversity, and encourages applications from any individual who meets the requirements of this position, regardless of gender, sexuality, race, ethnicity, religion, disability, age or other protected attributes. The School strives to provide an inclusive working environment, and along with the University, is committed to supporting staff with family and caring responsibilities by providing policies, programs and initiatives to help balance work and family responsibilities.

For more information about the School, please visit: http://www.mechmining.uq.edu.au/

Project overview

Develop and experimentally validate a multi-stage forming technique, whereby intermediate shapes are formed prior to the final desired shape. A systematic and efficient methodology for designing multi-stage deformation passes will be developed and enhanced based on model-based deformation analyses or alternatives.

Information for Prospective Staff

Information about life at UQ including staff benefits, relocation and UQ campuses is available at - http://www.uq.edu.au/current-staff/working-at-ug

The University of Queensland Enterprise Agreement outlines the position classification standards for Levels A to E.

DUTY STATEMENT

Primary Purpose of Position

The appointee will work in close collaboration with a team of researchers on projects including modelling, development and testing of new algorithms and/or processes as well as assessing outcomes and generating papers and reporting results to industry and academia in the area of advanced forming.
Duties

Duties and responsibilities include, but are not limited to:

**Research**

- Work with colleagues and postgraduates in the development of joint research projects
- Assist with the design, development, testing, document, and deploy research in ISF including performing laboratory experiments and reporting on the results.
- Conduct research and publish scholarly papers in high-quality refereed journals, books and conference proceedings.
- Present regular research seminars within the group and within the School/Faculty and to external stakeholders.
- Build collaborative research projects within the area of research, Schools, Centres and Institutes.

**Teaching and Learning**

- As a ‘Research focussed‘ position there is no formal requirement for undergraduate teaching. However it is encouraged that you actively seek teaching opportunities.
- Support HDR students within the School in research training,
- Participate in events to attract postgraduate students to the School and Centre

**Service and Engagement**

- Contribute to the processes that enable the academic team to manage the work of the School, including participate in School decision-making and serve on School committees
- Perform a range of administrative functions in the School including managing and reporting weekly work for the Advanced Forming Group, and for key stakeholders and Industry partners.
- Effectively source and recommend the purchase of materials and equipment in accordance with UQ policy.
- Foster the School’s relations with industry, government departments, professional bodies and the wider community.
- Effectively train staff and students in the safe and effective operations of equipment and research laboratories in accordance with University requirements.
- Any other duties as reasonably directed by your supervisor
**Safety**

- Conduct inductions, prepare risk assessments, and ensure users of laboratories and equipment have been thoroughly trained.
- Maintain laboratories and equipment in a safe and clean condition.
- Act as laboratory manager if required.

**For Appointment at Level B**

**Duties as listed above, in addition to the following:**

- Engage in independent and/or team research programs including external funding, and achieve national recognition and impact in the research area.
- Conduct research and publish scholarly papers in both academic peer-reviewed and professional international journals that contribute to the School’s strategic research strengths.
- Contribute to the effective supervision of undergraduate and postgraduate coursework student thesis and design courses, and supervise Higher Degree by Research students.
- Build collaborative research projects within the area of research, Schools, Centres, nationally and internationally.

**Other**

Ensure you are aware of and comply with legislation and University policy relevant to the duties undertaken, including but not exclusive to:

- the [University’s Code of Conduct](#)
- requirements of the Queensland occupational health and safety (OH&S) legislation and related [OH&S responsibilities and procedures](#) developed by the University or Institute/School
- the adoption of sustainable practices in all work activities and compliance with associated legislation and related University [sustainability responsibilities and procedures](#)
- requirements of the Education Services for Overseas Students Act 2000, the National Code 2007 and associated legislation, and related [responsibilities and procedures](#) developed by the University

**Organisational Relationships**

The position reports to the Professor Paul Meehan.
SELECTION CRITERIA

Essential

- PhD (or thesis submission) in mechanical engineering, electrical engineering or a related field
- Demonstrated problem solving ability in the areas of control theory and/or applied modelling and optimisation and/or the ability to rapidly acquire this knowledge.
- Ability to develop, design and implement mathematical models, computer code and control systems for mechanical problems.
- A track record of publication of original research in reputed peer reviewed journals and conferences.
- Ability to achieve national recognition in the area of expertise.
- Ability to participate in applications for external funding
- Demonstrated ability to work collaboratively with colleagues, administrative, and technical staff from a multi-cultured and multi-disciplinary background
- Demonstrated high-level interpersonal skills including the ability to communicate, consult and negotiate with other stakeholders to ensure project objectives are met.
- Demonstrated ability to prioritise own workload, work independently and meet deadlines.
- Demonstrated problem solving ability in the areas of control theory and/or applied modelling and optimisation and/or the ability to rapidly acquire this knowledge.
- Ability to develop, design and implement mathematical models, computer code and control systems for mechanical problems.
- An ability to establish effect relationships and to represent and promote academic discipline at a university and wider community level, including industry, government and professional bodies.

Desirable

- Demonstrated knowledge on electromagnetic imaging
- Demonstrated familiarity with human ethics processes and the ability to manage patient data in compliance with ethics protocols
- Demonstrated experience in implementing computational electromagnetics techniques in microwave systems
For Appointment at Level B
As listed above, in addition to the following:

**Essential**

- Evidence of engagement in independent and/or team research projects.
- Ability to achieve national recognition in the area of expertise
- Demonstrated ability and willingness to contribute toward effective supervision of honours and HDR students and participate in teaching coursework students
- Ability to successfully deliver outputs to industry
- Evidence of a contribution to research, including successful external grant applications
- Experience in liaising and collaborating with external agencies to develop co-operative research initiatives.

**Seminar**

Applicants invited for interview may be expected to present a seminar in conjunction with the selection interview process.

**Qualification Verification**

An appointment to this position is subject to the verification of the highest academic qualification from the conferring institution.

The University of Queensland values diversity and inclusion and actively encourages applications from those who bring diversity to the University. Please refer to the University’s Diversity and Inclusion webpage (http://www.uq.edu.au/equity) for further information and points of contact if you require additional support.

This role is a full-time position; however flexible working arrangements may be negotiated.

Accessibility requirements and/or adjustments can be directed to the contact person listed in the job advertisement.